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# Installation instructions for Ubuntu Core

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## Purpose

We will walk you through the steps of flashing Ubuntu Core for Intel IoT platforms. At the end of this process, you will have a board ready for production or testing snaps.

## Prerequisites

- An Ubuntu SSO account with an SSH key
- An ODM board using Intel Elkhart Lake or Tiger Lake platforms
- 2 USB 2.0 or 3.0 flash drives (2GB minimum)
- A monitor with an HDMI interface
- A Mini HDMI to HDMI cable
- A USB keyboard and a mouse
- A monitor with VGA or HDMI interface
- A VGA or HDMI cable
- A network connection with Internet access
- An Ubuntu Core Intel image

## Installation instructions

### 1. Set up an Ubuntu SSO account

An Ubuntu SSO account is required to create the first user on an Ubuntu Core installation.

1. Start by creating an [Ubuntu SSO account](#).
2. Import an SSH Key into your [Ubuntu SSO account](#). ([instructions](#))

### 2. Download Ubuntu Core

Download the [Ubuntu Core for Intel IoT platforms](#)

You can then verify the integrity of the download using the associated [MD5SUM file](#) and the md5sum command on most Linux distributions.

### 3. Flash the USB drives

1. Download and copy the [Ubuntu Desktop 20.04.3 LTS](#) image on the first USB flash drive by following the live USB Ubuntu Desktop tutorial for [Ubuntu](#), [Windows](#), or [macOS](#)

2. Copy the Ubuntu Core for Intel IoT platforms image on the second USB flash drive

#### 4. Install Ubuntu Core

1. Connect your USB hub, keyboard, mouse, monitor to the board.
2. Insert the first USB flash drive, containing Ubuntu Desktop 20.04.3 LTS.
3. Connect the USB hub, keyboard, mouse and the monitor to the board.
4. Insert the Live USB Ubuntu Desktop flash drive on the board.

#### 5. Boot from the Live USB flash drive

1. Make sure the device is configured to boot from the USB flash drive, and start the device
2. Select "Try Ubuntu without installing".

#### 6. Flash Ubuntu Core

1. Once the Ubuntu session has started, insert the second USB flash drive containing the Ubuntu Core image file.
2. Open a terminal and use the following command to find out the target disk device to install the Ubuntu Core image to:  
`sudo fdisk -l`
3. Run the following command, where <disk label> is the label of the second USB flash drive:  
`xzcat /media/ubuntu/<disk label>/ubuntu-core-20-amd64+intel-iot.img.xz | sudo dd of=/dev/<target disk device> bs=32M status=progress; sync`
4. Reboot the system and remove the flash drives when prompted. It will then boot from the internal memory where Ubuntu Core has been flashed.

#### 7. First boot setup

1. The system will boot then become ready to configure.
2. The device will display the prompt "Press enter to configure".
3. Press enter then select "Start" to begin configuring your network and an administrator account. Follow the instructions on the screen, you will be asked to configure your network and enter your Ubuntu SSO credentials.
4. At the end of the process, you will see your credentials to access your Ubuntu Core machine:  
This device is registered to <Ubuntu SSO email address>. Remote access was enabled via authentication with the SSO user <Ubuntu SSO user name> Public

SSH keys were added to the device for remote access.

## 8. Login

Once setup is done, you can login with SSH into Ubuntu Core, from a machine on the same network, using the following command:

```
ssh <Ubuntu SSO user name>@<device IP address>
```

Your user name is your Ubuntu SSO user name, it has been reminded to you at the end of the account configuration step.

## First boot tips

- During setup, console-conf will download the SSH key registered with your Store account and configure it so you can log into the device via `ssh <Ubuntu SSO account name>@<device IP address>` without a password.
- There is no default ubuntu user on these images, but you can run `sudo passwd <account name>` to set a password if you need a local console login

If you have questions or issues regarding your specific board configuration, reach out to Canonical [sales-iotg@canonical.org](mailto:sales-iotg@canonical.org)